

DETAILED ACTION

1. Applicant's amendment filed on December 27, 2007 has been entered. Claims 1-39 and 44-69 are pending.

Examiner's Amendment

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Eric M. Parham on March 19, 2008. The applicant has agreed to amend claims 1, 13, 24, and 67-68 to keep the claimed language consistent.

CLAIMS:

3. Please cancel claims 40-43
4. **Please replace claim 1 as follows:**

A hybrid digital watermarking system for video authentication, the system comprising:

an authenticated acquisition subsystem for digital watermarking video data;

a video management subsystem in signal communication with the authenticated acquisition subsystem for verifying the digital watermarked video data; and

signature means for applying a control signature to the video data,

wherein the signature means embeds signature bits into data blocks in accordance with a pseudo-random sequence that introduces a dependency among the blocks,

wherein the pseudo-random sequence is generated from a data-dependent seed extracted from at least one frame,

wherein the data-dependent seed is responsive to at least one DC coefficient, and

wherein the at least one DC coefficient is coarsely quantized prior to seed generation.

Please replace claim 13 as follows:

A method of hybrid digital watermarking for video authentication, the method comprising:

digitally watermarking video data;

verifying the digitally watermarked video data;

applying a control signature to the video data;

embedding bits of the control signature into data blocks in accordance with a pseudo-random sequence that introduces a dependency among the blocks;

extracting a data-dependent seed from at least one frame, wherein the seed is responsive to at least one DC coefficient;

generating the pseudo-random sequence from the extracted data-dependent seed; and

applying a coarse quantizer to the at least one DC coefficient prior to seed generation.

Please replace claim 24 as follows:

A method as defined in Claim 23, further comprising:

extracting a data-dependent seed from at least one frame; and
generating the pseudo-random sequence from the extracted seed.

Please replace claim 26 as follows:

A method as defined in Claim 25 wherein the data-dependent seed is responsive to at least one DC coefficient.

Please replace claim 67 as follows:

A system as defined in Claim 66 wherein the data-dependent seed for generating the pseudo-random sequence is itself generated using a hash function.

Please replace claim 68 as follows:

A system as defined in Claim 67 wherein the data-dependent seed is responsive to at least one DC coefficient.

Response to Arguments

5. Applicant's arguments filed on December 27, 2007 for double patenting rejection have been fully considered and are persuasive. Therefore the previous rejection under double patenting has been withdrawn.

Allowable Subject Matter

6. Claims 1-39 and 44-69 are allowed.

7. The following is an examiner's statement of reasons for allowance: The prior art does not disclose signature means for applying a control signature to the video data, wherein the signature means embeds signature bits into data blocks in accordance with a pseudo-random sequence that introduces a dependency among the blocks, wherein the pseudo-random sequence is generated from a data-dependent seed extracted from at least one frame, wherein the data-dependent seed is responsive to at least one DC coefficient, and wherein the at least one DC coefficient is coarsely quantized prior to seed generation as set forth in claim 1. The prior art also does not disclose applying a control signature to the video data; embedding bits of the control signature into data blocks in accordance with a pseudo-random sequence that introduces a dependency among the blocks; extracting a data-dependent seed from at least one frame, wherein the seed is responsive to at least one DC coefficient; generating the pseudo-random sequence from the extracted data-dependent seed; and applying a coarse quantizer to the at least one DC coefficient prior to seed generation as set forth in claim 13.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanhnga (Tanya) Truong whose telephone number is 571-272-3858.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached on 571-272-3859. The central fax number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2100.

/Thanhnga B. Truong/
Primary Examiner, Art Unit 2135

TBT

March 19, 2008